CLAIMS

1. (Original) A method for use in a parallel database system having plural nodes, comprising:

    providing random number generators in the plural nodes;

    generating, in parallel, random numbers using the random number generators in the plural nodes; and

    performing random sampling using the generated random numbers.

2. (Original) The method of claim 1, wherein providing the random number generators in the plural nodes comprises providing random number generators in at least some of the plural nodes.

3. (Original) The method of claim 1, wherein the random number generators in the plural nodes are part of a first set of random number generators, the method further comprising using at least one other random number generator to generate random numbers provided as seeds to the first set of random number generators.

4. (Original) The method of claim 1, further comprising determining a number of random samples to select in each node based on the generated random numbers in the node.

5. (Original) The method of claim 1, further comprising:

    providing a plurality of parameters;

    adjusting values of the parameters based on values of the random numbers; and

    determining a number of random samples to select based on the parameters.

6. (Original) The method of claim 5, wherein providing the parameters, adjusting the values of the parameters, and determining the number of random samples are performed in each of the plural nodes.

7. (Original) The method of claim 5, further comprising:

associating the parameters with corresponding predefined ranges;

determining which range each random number falls within; and

adjusting the value of one of the parameters based on the determined range of each random number.

8. (Original) The method of claim 7, wherein adjusting the value of the one parameter comprises incrementing the value of the one parameter.

9. (Original) The method of claim 8, wherein incrementing the value of the one parameter occurs in response to each occurrence of a random number in the determined range.

10. (Original) The method of claim 7, further comprising communicating certain of the parameters between nodes, each node determining the number of random samples based on the communicated parameters.

11. (Original) The method of claim 1, further comprising:

defining plural ranges; and

counting a number of occurrences of random numbers in each of the plural ranges.

12. (Original) The method of claim 11, further comprising:

storing plural parameters having values set to represent the number of occurrences of random numbers in corresponding ranges.

13. (Original) The method of claim 1, further comprising:

generating random number seeds at one node;

sending the random number seeds to plural nodes from the one node; and

the random number generators in the plural nodes using corresponding random number seeds.

14. (Original) A database system comprising:

a plurality of nodes, wherein each of at least two of the plurality of nodes comprises:

a storage for storing tuples of a relation; and

a controller adapted to generate random numbers,

the controller adapted to determine a number of random samples to generate in the node using the random numbers.

15. (Original) The database system of claim 14, wherein each node further comprises a processor, and wherein the controller is a software program executable by the processor.

16. (Original) The database system of claim 14, wherein one of the nodes comprises a first random number generator, and wherein each of the nodes comprises a second random number generator to generate the random numbers, the first random number generator to generate random number seeds for use by the second random number generators.

17. (Original) The database system of claim 16, wherein the one node communicates the random number seeds to corresponding nodes.

18. (Original) The database system of claim 16, wherein the plural nodes comprise nodes i, $i = 1 - L$, wherein the first random number generator is adapted to generate random number seeds s_i, $i = 1 - L$, and wherein the one node is adapted to send each random number seed s_i to node i.

19. (Original) The database system of claim 18, wherein the second random number generator in each node i is adapted to generate random numbers $r_1 \ldots r_{Mi}$, where M_i represents a number of random numbers to be generated in node i.

4

20. (Original) The database system of claim 19, the storage in each node i to store array elements $A_{i1} \ldots A_{iL}$, the controller adapted to adjust the value of A_{ij}, j equal to a value between 1 and L, based on which of plural predefined ranges each random number r falls within.

21. (Original) The database system of claim 20, wherein each node is adapted to communicate certain of these array elements to other nodes.

22. (Original) The database system of claim 21, wherein the controller in each node is adapted to sum values of the array elements to derive the number of random samples to generate.

23. (Original) An article comprising at least one storage medium storing instructions that when executed cause a database system to:

generate random numbers in each of plural nodes of the database system; and

use the random numbers to determine a number of random samples to generate in each node.

24. (Original) The article of claim 23, wherein the instructions when executed cause the database system to provide a first random number generator in each node to generate the random numbers.

25. (Original) The article of claim 24, wherein the instructions when executed cause the database system to provide a second random number generator in one of the nodes to generate random number seeds for use by the first random number generators.

26. (Original) The article of claim 25, wherein the instructions when executed cause the database system to distribute the random number seeds to the plural nodes.

5

27. (Original) The article of claim 23, wherein the instructions when executed cause the database system to further:

define parameters in each node; and

adjust the parameters based on values of the random numbers in each node, wherein determining the number of random samples is based on the parameters.

28. (Original) The article of claim 27, wherein the instructions when executed cause the database system to distribute certain of the parameters from each of the nodes to other nodes.

29. (Original) The article of claim 28, wherein the instructions when executed cause the database system to sum the parameters at each of the nodes to derive the number of random samples.

30. (Original) An article comprising at least one storage medium storing instructions executable in a database system having plural nodes, the instructions when executed causing a system to:

generate random number seeds;

communicate the random number seeds to the plural nodes; and

generate random numbers in each node using at least one of the random number seeds.

31. (Original) The article of claim 30, wherein the instructions when executed cause the database system to determine a number of random samples to generate in each node based on the generated random numbers.